



[7590-01-P]

NUCLEAR REGULATORY COMMISSION

[NRC-2015-0161]

**Comprehensive Vibration Assessment Program for Reactor Internals During
Preoperational and Startup Testing**

AGENCY: Nuclear Regulatory Commission.

ACTION: Draft regulatory guide; request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is issuing for public comment draft regulatory guide (DG), DG-1323, “Comprehensive Vibration Assessment Program for Reactor Internals During Preoperational and Startup Testing.” This guide describes methods and procedures that the staff of the NRC considers acceptable when a developing a comprehensive vibration assessment program (CVAP) for power reactor internals during preoperational and startup testing.

DATES: Submit comments by **[INSERT DATE 60 DAYS FROM THE DATE OF PUBLICATION IN THE FEDERAL REGISTER NOTICE]**. Comments received after this date will be considered if it is practical to do so, but the NRC is able to ensure consideration only for comments received on or before this date. Although a time limit is given, comments and suggestions in connection with items for inclusion in guides currently being developed or improvements in all published guides are encouraged at any time.

ADDRESSES: You may submit comments by any of the following methods (unless this document describes a different method for submitting comments on a specified subject):

- **Federal Rulemaking Web site:** Go to <http://www.regulations.gov> and search for Docket ID NRC-2015-0161. Address questions about NRC dockets to Carol Gallagher; telephone: 301-415-3463; e-mail: Carol.Gallagher@nrc.gov. For technical questions, contact the individual(s) listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **Mail comments to:** Cindy Bladey, Office of Administration, Mail Stop: OWFN-12H08, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

For additional direction on obtaining information and submitting comments, see “Obtaining Information and Submitting Comments” in the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: Thomas Scarbrough, Office of New Reactors, telephone: 301-415-2794, email: Thomas.Scarbrough@nec.gov or Yuken Wong, Office of New Reactors, telephone: 301-415-0500, email: Yuken.Wong@nrc.gov; and Stephen Burton, Office of Nuclear Regulatory Research, telephone: 301-415-7000, email: Stephen.Burton@nrc.gov. All are staff of the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

SUPPLEMENTARY INFORMATION:

I. Obtaining Information and Submitting Comments

A. Obtaining Information

Please refer to Docket ID NRC-2015-0161 when contacting the NRC about the availability of information regarding this document. You may obtain publically-available information related to this document, by any of the following methods:

- **Federal Rulemaking Web site:** Go to <http://www.regulations.gov> and search for Docket ID NRC-2015-0161. Address questions about NRC dockets to Carol Gallagher; telephone: 301-415-3463; e-mail: Carol.Gallagher@nrc.gov. For technical questions, contact the individual(s) listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **NRC's Agencywide Documents Access and Management System (ADAMS):** You may obtain publicly-available documents online in the ADAMS Public Documents collection at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "[ADAMS Public Documents](#)" and then select "[Begin Web-based ADAMS Search](#)." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov. The DG is electronically available in ADAMS under Accession No. ML15083A390.

- **NRC's PDR:** You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

B. Submitting Comments

Please include Docket ID NRC-2015-0161 in your comment submission in order to ensure that the NRC is able to make your comment submission available to the public in this docket.

The NRC cautions you not to include identifying or contact information in comment

submissions that you do not want to be publicly disclosed in your comment submission. The NRC posts all comment submissions at <http://www.regulations.gov> as well as entering the comment submissions into ADAMS. The NRC does not routinely edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons not to include identifying or contact information in their comment submissions that they do not want to be publicly disclosed in their comment submission.. Your request should state that the NRC does not routinely edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment submissions into ADAMS.

II. Additional Information

The NRC is issuing for public comment a DG in the NRC's "Regulatory Guide" series. This series was developed to describe and make available to the public information regarding methods that are acceptable to the NRC staff for implementing specific parts of the NRC's regulations, techniques that the staff uses in evaluating specific issues or postulated events, and data that the staff needs in its review of applications for permits and licenses.

The DG, entitled, "Comprehensive Vibration Assessment Program for Reactor Internals During Preoperational and Startup Testing" is a proposed revision temporarily identified by its task number, DG-1323. This DG-1323 is proposed Revision 4 of Regulatory Guide 1.20, "Comprehensive Vibration Assessment Program for Reactor Internals During Preoperational and Startup Testing." This regulatory guide describes methods and procedures that the staff of the NRC considers acceptable when developing a comprehensive vibration assessment program (CVAP) for power reactor internals during preoperational and startup testing. The DG

describes methodology the NRC staff considers acceptable to support its review of applications for (1) nuclear reactor construction permits or operating licenses under part 50 of Title 10 of the *Code of Federal Regulations* (10 CFR); (2) design certifications and combined licenses under 10 CFR part 52, “Licenses, Certifications, and Approvals for Nuclear Power Plants;” and (3) license amendment requests for extended power uprates at operating reactors. The DG also describes methodology the staff considers acceptable for use by licensees of operating plants planning significant plant modifications that might induce potential adverse flow effects on structures, systems, and components within the scope of the DG.

This proposed regulatory guide has been revised to expand the guidance related to flow-induced vibration, acoustic resonance, acoustic-induced vibration, and mechanical-induced vibration for boiling water reactors, pressurized water reactors, and small modular reactors. For small modular reactors, this includes guidance for the control rod drive system and mechanisms which might be contained in an integral reactor vessel. The additional guidance in this proposed revision is based in part on lessons learned from the review of recent applications, including both new plant applications and extended power uprate applications. In addition, the proposed revision re-defines and clarifies the prototype, limited prototype, and non-prototype classifications of reactor internal configurations. Also, the proposed revision aligns the format and content of the guide with the current program guidance for regulatory guides since Revision 3 of RG 1.20 was issued.

III. Backfitting and Issue Finality

Issuance of this regulatory guide, if finalized, does not constitute backfitting as defined in 10 CFR 50.109 (the Backfit Rule) and is not otherwise inconsistent with the issue finality provisions in 10 CFR part 52. This regulatory guide would not apply to any nuclear reactor construction permits or operating licenses under 10 CFR part 50, design certifications and

combined licenses under 10 CFR part 52, or license amendment requests for extended power uprates at operating reactors already issued by the NRC prior to issuance of the regulatory guide. The NRC has already completed its review of CVAPs for power reactor internals for these construction permits, operating licenses, design certifications, combined operating licenses, and license amendments for extended power uprates. Therefore, no further NRC regulatory action with respect to CVAPs will occur for those licenses, permits, certifications, and authorizations for which the guidance in the regulatory guide would be relevant, absent voluntary action by the licensees to use the guidance to demonstrate compliance with the underlying NRC regulations.

The regulatory guide, if finalized, may be applied to applications for construction permits, operating licenses, design certifications, combined licenses, and license amendments for extended power uprates, any of which are docketed and under review by the NRC as of the date of issuance of the final regulatory guide. If finalized, the regulatory guide may also be applied to applications for construction permits, operating licenses, design certifications, combined licenses, and license amendments for extended power uprates, any of which are submitted after the issuance of the final regulatory guide. Such action would not constitute backfitting as defined in 10 CFR 50.109(a)(1) and is not otherwise inconsistent with the applicable issue finality provisions in 10 CFR part 52 because such applicants and potential applicants are not, with certain exceptions, protected by either the Backfit Rule or any issue finality provisions under part 52. This is because neither the Backfit Rule nor the issue finality provisions under part 52—with certain exclusions discussed below—was intended to apply to every NRC action that substantially changes the expectations of current and future applicants. The exceptions to the general principle are applicable whenever an applicant references a 10 CFR part 52 license (e.g., an early site permit), NRC regulatory approval (e.g., a design certification rule), or both, with specified issue finality provisions. The NRC does not,

at this time, intend to impose the positions represented in the regulatory guide, if finalized, in a manner that is inconsistent with any issue finality provisions. If, in the future, the staff seeks to impose a position in the regulatory guide, if finalized, in a manner that does not provide issue finality as described in the applicable issue finality provision, then the staff must address the criteria for avoiding issue finality as described in the applicable issue finality provision.

Dated at Rockville, Maryland, this 26th day of June, 2015.

For the Nuclear Regulatory Commission.

Thomas H. Boyce,
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Regulatory Guidance and Generic Issues Branch,
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